

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of the claims in the application:

**Listing of claims:**

1. (Currently Amended) A termination resistor comprising:
  - a first transistor;
  - a second transistor having a gate coupled to a gate of said first transistor, and having a drain coupled to a drain of said first transistor;
  - a third transistor having a drain coupled to a source of said second transistor; and
  - a first resistor coupled to between a source of said first transistor, and a gate and source of said third transistor.
2. (Original) The termination resistor of claim 1, wherein said first, second and third transistors comprise metal-oxide semiconductor transistors.
3. (Original) The termination resistor of claim 2, wherein said metal-oxide semiconductor transistors comprise positive-channel metal-oxide semiconductor transistors.
4. (Original) The termination resistor of claim 2, wherein said metal-oxide semiconductor transistors comprise negative-channel metal-oxide semiconductor transistors.
5. (Original) The termination resistor of claim 1, wherein said first resistor comprises a poly resistor.
6. (Original) The termination resistor of claim 1, wherein said first resistor comprises a positive-channel metal-oxide semiconductor transistor.
7. (Currently Amended) The termination resistor of claim 1, further comprising a differential amplifier having an output coupled to the gate of said first transistor and the gate of said second transistor, and having a first input coupled to the first resistor and the source and gate of said third transistor.

8. (Currently Amended) The termination resistor of claim 7, further comprising a ground lead to be coupled to ground and a second resistor coupled to between the first input of said differential amplifier and the ground lead.

9. (Cancelled).

10. (Withdrawn--Currently Amended) A The termination resistor of claim 1 arranged in a semiconductor device, the semiconductor device further comprising [[:]] a semiconductor die [[;]]

a first transistor coupled to said semiconductor die;  
a second transistor coupled to said first transistor;  
a third transistor coupled to said second transistor; and  
a first resistor coupled to said first transistor.

11-17. (Cancelled).

18. (Withdrawn--Currently Amended) An on-die The termination resistor of claim 1, integrated on a silicon die semiconductor die having power and pad terminals, said termination resistor comprising wherein:

a first transistor having a first the drain of the first transistor and the drain of the second transistor are coupled to the power terminal of the semiconductor die, a first gate and a first source;

a second transistor having a second drain coupled to the power terminal, a second gate coupled to said first gate, and a second source;

a third transistor having a third drain coupled to said second source, a third source coupled to the pad terminal, and a third gate coupled to the pad terminal; and

the [[a]] first resistor and the gate and source of the third transistor are coupled to the pad terminal of the semiconductor die and said first source.

19-25. (Cancelled).

26. (New) The termination resistor of claim 1, wherein a resistance of said first resistor is to prevent the first transistor from entering into saturation.

27. (New) The termination resistor of claim 1, further comprising a bias lead to be coupled to a bias voltage, a power lead to be coupled to a power supply voltage, and an output lead to provide output from the termination resistor, wherein:

the gate of the first transistor and the gate of the second transistor are coupled to the bias lead;

the drain of the first transistor and the drain of the second transistor are coupled to the power lead, and

the first resistor and the gate and source of the third transistor are coupled to the output lead.

28. (New) The termination resistor of claim 27, wherein, if measured via the output lead, the termination resistor has a linear voltage-current characteristic for output voltages at the output lead below a threshold voltage  $V_t$  of the first transistor.

29. (New) The termination resistor of claim 1, wherein a resistance of said first resistor is about 50% of a total resistance of the termination resistor.

30. (New) The termination resistor of claim 6, further comprising a power lead to be coupled to a power supply voltage and a ground lead to be coupled to ground, wherein the drain of the first transistor and the drain of the second transistor are coupled to the power lead, and a gate of the positive-channel metal-oxide semiconductor transistor is coupled to the ground lead.

31. (New) The termination resistor of claim 7, further comprising an output lead to provide output from the termination resistor, said output of the differential amplifier being coupled to the output lead.

32. (New) The termination resistor of claim 8, further comprising an output lead to provide output from the termination resistor, said output of the differential amplifier being coupled to the output lead.

33. (New) The termination resistor of claim 32, wherein a total resistance of the termination resistor  $R_{ODT}$  satisfies:

$$(1-1/A)/(1+1/A) < R_{ODT}/R_{ref} < (1+1/A)/(1-1/A)$$

where  $R_{ref}$  is a resistance of said second resistor and "A" is a gain of the differential amplifier.

34. (New) The termination resistor of claim 33, wherein a resistance of said first resistor is about 50% of the total resistance of the termination resistor.

35. (New) The termination resistor of claim 33, further comprising a power lead to be coupled to a power supply voltage  $V_{cc}$ , wherein the drain of the first transistor and the drain of the second transistor are coupled to the power lead, and wherein a second input of said differential amplifier is arranged to receive  $\frac{1}{2} V_{cc}$ .